



RURAL DEVELOPMENT

Rural Housing Service
Rural Business – Cooperative Service
Rural Utility Service

Colorado State Office
655 Parfet Street, Room E100
Lakewood, Colorado 80215
(720) 544-2912 (Voice line)
(720) 544-2972 (FAX line)
(720) 544-2976 (TTY line)

Dedicated to Strengthening and Serving Rural America

SUBJECT: ARCHITECTURAL TECHNICAL GUIDE 0006 (December 19, 2002)
Kitchen and Bathroom Exhaust Ventilation:
Requirements for Single Family Housing New and Existing Construction

PURPOSE:

The purpose of this technical guide is to continue Rural Development Colorado's policy regarding providing effective room ventilation for kitchens and bathrooms in new and existing Rural Housing Section 502 Program assisted residences.

IMPLEMENTATION RESPONSIBILITIES:

Reducing grease and moisture laden air rapidly from residences in Colorado's cold climate is essential to reducing potential long-term fire hazard and moisture related problems in building materials. Following are recommended guidelines for new and existing construction.

New Construction:

All kitchens in newly constructed residences proposed for Section 502 assistance should contain a rangehood above the range/oven, in accordance with Paragraph IV.D.3.a.(ii) of Rural Development Instruction 1924-A and in accordance with good practice, . Adequate ventilation for all bathrooms should be accomplished by an exhaust fan in lieu of a window. The rangehood and bathroom exhaust fans should contain a back-draft damper and should be ducted directly to the exterior of the structure. No such ductwork should be permitted to exhaust into the attic or crawlspace of the structure. The rangehood and bathroom exhaust fans should have a minimum capacity rating equivalent to the criteria stated in Exhibit A to this AN, in accordance with the requirements of Section 1205 of the 1991 Uniform Building Code.

Existing Construction:

All kitchens in existing residences proposed for Section 502 assistance should be retrofitted to contain a rangehood above the range/oven, if not already provided, in accordance with Paragraph IV.D.3.a.(ii) of Rural Development Instruction 1924-A and in accordance with good practice. All bathrooms should be retrofitted to contain an exhaust fan, if not already provided, even though a window may already be present. (Historical evidence has shown that bathroom windows are not opened frequently for ventilation during cold Colorado winters.) The rangehood and bathroom exhaust fans should contain a back-draft damper and should be ducted directly to the exterior of the structure. No such ductwork should be permitted to exhaust into the attic or crawlspace of the structure. The rangehood and bathroom exhaust fans should have a minimum stated capacity rating equivalent to the criteria stated in Exhibit A to this AN, in accordance with the requirements of Section 1205 of the 1991 Uniform Building Code.

The State Architect may be consulted should any questions arise regarding retrofitting problems or other related matters.

DAVID W. RIGIROZZI
State Architect
USDA/Rural Development

Attachment: Exhibit A: "Kitchen Rangehood and Bathroom Exhaust Fan Sizing Requirements"

Exhibit A

**KITCHEN RANGEHOOD AND BATHROOM EXHAUST FAN SIZING
REQUIREMENTS**

(The following requirements have been extracted from Rural Development Colorado's Development Standards, specifically, Section 1205 of the 1991 Uniform Building Code, and should be used as a quick reference for sizing rangehoods and bathroom exhaust fans. These requirements are not intended for recirculating exhaust systems.)

KITCHEN RANGEHOODS:

<u>Fan Capacity (cubic feet per minute*)</u>	<u>Room Size (square feet)</u>
15	55 or less
17	56 to 64
19	65 to 71
21	72 to 79
23	80 to 86
25	87 to 94

BATHROOM EXHAUST FANS:

<u>Fan Capacity (cubic feet per minute*)</u>	<u>Room Size (square feet)</u>
30	45 or less
35	46 to 52
40	53 to 60
45	61 to 68
50	68 to 75

*Please note that actual proposed fan capacities will normally probably significantly exceed the shown values.